

84 48. (Amended) The device of claim 9 for heat sealing at least two thermoplastic films having a given transverse width, wherein when the front and rear jaws are in the closed position, the front jaw release sheet conforms to greater than 20% of the surface area of the heating element that is within the transverse width of the at least two thermoplastic films.

Support for these amendments may be found in the application as originally filed, for example, at least as follows:

Claims 22 and 42 -- page 9, lines 4-10 and Figs. 3-5.

Claim 33 -- page 7, lines 17-27.

REMARKS

Applicants respectfully request reconsideration of the above-identified application. Claims 1-33 and 35-48 remain in this application. Claims 22, 33, 42, and 48 are amended to more particularly point out and distinctly claim the subject matter that Applicants regard as their invention. Claim 34 has been cancelled. Applicants respectfully traverse the rejections as conceivably applied to the amended claims.

Attached is a marked-up version of the changes made to the claims by the current amendment. The attachment is captioned "Version with Markings to Show Changes Made."

I. Allowable Subject Matter

Applicants note with appreciation the allowance of claims 1-21, 27-29, and 35-37.

II. Non-Art Rejections

Applicants have rewritten claim 48 to overcome the indefiniteness rejection under 35 U.S.C. § 112, second paragraph. Claim 48 now depends from allowed independent claim 9, which provides antecedent basis for "the front jaw release sheet" recitation.

III. Rejections Based on Kochmer

A. Claims 42-47

As previously presented, claims 42-47 were rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent 3,253,122 to Kochmer.

Kochmer teaches a heat-sealing wire 16 that is disposed in a longitudinally extending groove 15 in the bar. (Column 2, lines 6-16; Fig. 3.)

Independent claim 42, as amended, recites that the heating element is unembedded. Kochmer fails to teach or suggest an unembedded heating element – much less an unembedded heating element having the recited size relative to the resilient portion of the rear jaw. To the direct contrary, Kochmer teaches embedding heating element 16 in groove 16 of the bar. Accordingly, Kochmer fails to anticipate claim 42.

Dependent claims 43-47 include additional recitations to those of independent claim 42 and are therefore further patentable over Kochmer.

B. Claims 22-26 and 30-32

As previously presented, claims 22-26 and 30-32 were rejected under 35 U.S.C. §103(a) as obvious over Kochmer combined with The Wiley Encyclopedia of Packaging Technology, “Sealing, Heat”, John Wiley & Sons, 1986, Pages 574-578 (“Wiley”).

Kochmer is discussed above. Wiley teaches “Teflon-coated Kapton” as an electrically insulating layer to cover the nichrome ribbon of an impulse sealer. (Page 575, column 2.)

Independent claim 22, as amended, recites that the heating element is unembedded. As discussed above, Kochmer fails to teach or suggest an unembedded heating element. Wiley fails to supplement this shortcoming because it fails to teach or suggest an unembedded heating element having the recited size relative to the resilient portion of the rear jaw.

Thus, the combination of Kochmer and Wiley as conceivably applied to amended claim 22 does not render the claimed invention obvious because the combination fails to teach or suggest all of the claim recitations. MPEP §2143.03.

Dependent claims 23-26 and 30-32 include additional recitations to those of independent claim 22 and are therefore further patentable over the combination of Kochmer and Wiley.

C. Claims 33 and 41

As previously presented, claims 33 and 41 were rejected under 35 U.S.C. §103(a) as obvious over Kochmer combined with Wiley.

Kochmer is discussed above. Wiley teaches "Teflon-coated Kapton" as an electrically insulating layer to cover the nichrome ribbon of an impulse sealer. (Page 575, column 2.)

Independent claim 33, as amended, recites that the unreinforced release material of the front jaw release sheet consists essentially of fluoroplastic material. Kochmer fails to teach a front jaw release sheet at all, much less one having release material consisting essentially of fluoroplastic material. (See Office Action mailed March 13, 2002 at page 8, lines 3-4.) Wiley fails to supplement this shortcoming because it too fails to teach an unreinforced release material consisting essentially of fluoroplastic material. To the contrary, Wiley teaches Teflon-coated Kapton polyimide film. Such a film does not consist essentially of fluoroplastic because it contains polyimide.

Thus, the combination of Kochmer and Wiley as conceivably applied to amended claim 33 does not render the claimed invention obvious because the combination fails to teach or suggest all of the claim recitations. MPEP §2143.03.

Dependent claim 41 includes additional recitation to that of independent claim 33 and is therefore further patentable over the combination of Kochmer and Wiley.

D. Claim 48

As previously presented, claim 48 depended from independent claim 42, and was rejected under 35 U.S.C. §103(a) as obvious over Kochmer combined with Wiley. Dependent claim 48 has been amended to depend from allowed independent claim 9 -- and accordingly is also allowable over the art since it contains recitation in addition to that of allowed independent claim 9.

IV. Rejection Based on Bergevin

As originally presented, claims 33 and 38-40 were rejected under 35 U.S.C. § 103(a) as obvious in view of U.S. Patent 4,981,546 to Bergevin combined with Wiley.

Bergevin is directed to a device for sealing and severing thermoplastic films. (Column 2, lines 30-32.) Wiley teaches "Teflon-coated Kapton" as an electrically insulating layer to cover the nichrome ribbon of an impulse sealer. (Page 575, column 2.)

Independent claim 33, as amended, recites that the unreinforced release material of the front jaw release sheet consists essentially of fluoroplastic material. Bergevin fails to teach a front jaw release sheet at all, much less one having release material consisting essentially of fluoroplastic material. (See Office Action mailed March 13, 2002 at page 7, lines 4-5.) Wiley fails to supplement this shortcoming because it too fails to teach an unreinforced release material consisting essentially of fluoroplastic material. To the contrary, Wiley teaches Teflon-coated Kapton polyimide film. Such a film does not consist essentially of fluoroplastic because it contains polyimide.

Thus, the combination of Bergevin and Wiley as conceivably applied to amended claim 33 does not render the claimed invention obvious because the combination fails to teach or suggest all of the claim recitations. MPEP §2143.03.

Dependent claims 38-40 include additional recitations to that of independent claim 33 and are therefore further patentable over the combination of Bergevin and Wiley.

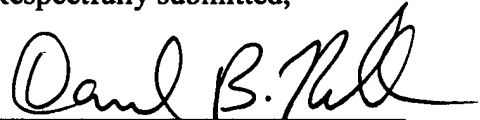
V. Conclusion

In view of the above amendments and these remarks, it is respectfully submitted that the present application is in condition for allowance. A notice to that effect is earnestly and respectfully requested.

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ATTACHMENT

Version with Markings to Show Changes Made

In the Claims:

Claims 22, 33, 42, and 48 have been amended as follows:

22. (Twice Amended) A device for simultaneously heat sealing and severing at least two thermoplastic films, the device comprising:

front and rear opposing jaws moveable between an open position defining a zone for inserting the at least two films between the front and rear jaws and a closed position in which the front and rear jaws are proximate each other, the rear jaw including a resilient portion facing the front jaw, the resilient portion having a given cross-sectional thickness;

a front jaw release sheet positioned between the insertion zone and the front jaw when the front and rear jaws are in the open position; and

an unembedded heating element positioned between the front jaw release sheet and the front jaw, the heating element having a cross-sectional thickness no less than about 0.55 times the cross-sectional thickness of the resilient portion.

33. (Amended) A device for heat sealing at least two thermoplastic films together, the device comprising:

front and rear opposing jaws moveable between an open position defining a zone for inserting the at least two films between the front and rear jaws and a closed position in which the front and rear jaws are proximate each other to compress the at least two thermoplastic films together, the rear jaw including a resilient portion facing the front jaw;

a front jaw release sheet positioned between the insertion zone and the front jaw when the front and rear jaws are in the open position, the front jaw release sheet including an unreinforced release material consisting essentially of fluoroplastic material; and

a heating element positioned between the front jaw release sheet and the front jaw.

42. (Twice Amended) A device for simultaneously heat sealing and severing at least two thermoplastic films, the device comprising:

front and rear opposing jaws moveable between an open position defining a zone for inserting the at least two films between the front and rear jaws and a closed position in which the front and rear jaws are proximate each other to compress the at least two thermoplastic films together, the rear jaw having a resilient portion facing the front jaw, the resilient portion having a given cross-sectional thickness; and

an unembedded heating element positioned between the insertion zone and the front jaw, the heating element having a cross-sectional thickness no less than about 0.55 times the cross-sectional thickness of the resilient portion.

48. (Amended) The device of claim 9 42 for heat sealing at least two thermoplastic films having a given transverse width, wherein when the front and rear jaws are in the closed position, the front jaw release sheet conforms to greater than 20% of the surface area of the heating element that is within the transverse width of the at least two thermoplastic films.